MIAMIBEACH

OFFICE OF THE CITY MANAGER

NO. LTC # 011-2011

LETTER TO COMMISSION

TO: Mayor Matti H. Bower and Members of the City Commission

FROM: Jorge M. Gonzalez, City Manager

DATE: January 14, 2011

SUBJECT: Australian Pines on Pinetree Drive

This Letter to Commission is intended to provide information on a recently completed study of the health status of the Australian pines on Pinetree Drive between 30th Street and 46th Street, as discussion relating to these trees will shortly come before the City Commission. In 2001, the City Commission designated this section of Pinetree Drive as the Pinetree Drive Historic Roadway in recognition of the historical importance of the Australian pines which were planted as a windbreak by John Collins approximately one hundred years ago. This is a County right-of-way, so the County has primary management responsibility.

There have been recurring issues relating to the roadway as a result of the Australian pine roots that are uplifting the pavement on Pinetree Drive. As a result of increasing issues and complaints, a study was proposed last August at a meeting with County and City staff. The purpose of the study would was to conduct a health and risk assessment of these trees. The City's Urban Forester, Chris Latt, assisting in identifying two qualified arborists with the necessary equipment and expertise; proposals were requested from them and forwarded to our Public Works Department on September 15, 2010.

Coincidently, also on September 15, an Australian pine with advanced basal decay on the Pinetree Drive median fell across the road's south-bound lanes near 34th Street. Fortunately, no vehicle was in the roadway at the time and no one was hurt. Please see attached photos showing the basal decay on the tree that fell across Pinetree Drive.

Chuck Lippi, a Registered Consulting Arborist and Board Certified Master Arborist, was selected to do the study and began work on October 13. He submitted a final draft report on November 7, 2010. Mr. Lippi developed a hazard score for each Australian pine, based on four rating categories:

- Likelihood or probability of failure
- Size of the part likely to fail
- Amount of tree lean
- Amount of decay

Each category was assigned a value from 1 to 3, and a tree's hazard rating is the sum of the four categories' numeric scores. The highest possible score is 12, the highest level of risk. 11% of the 295 Australian pines received a score of 12 (most hazardous), 29% a score of 11 (high hazard), and 5% a score of 10 (moderate high hazard), for a total of 45% of the trees with these hazard scores.

The main cause of Australian pine failures in Miami Beach, including on Pinetree Drive, has been basal trunk decay and associated root decay. As acknowledged in Mr. Lippi's report, it is difficult to measure the extent of this decay, but he observed basal decay in 32% of the trees in this study; 57% of the trees had some form of basal cavity, visible soft spot or area of suspected decay. While the presence of decay does not necessarily indicate an imminent hazard, it is a risk factor that is associated with tree failures. The extent of the decay, the amount of healthy wood growing around areas of decay, and the tree's structure and lean all affect a tree's stability. It should be noted that

these are old trees, perhaps 100 years old, while some observers claim that forty or fifty years is a typical life span for Australian pines in Florida. Old, senescent trees gradually lose their defensive capabilities. The decay in these trees will never improve, but is likely to increase. There is no treatment to prevent it.

Mr. Lippi recommended the removal of 121 high hazard trees, but also stated that the recommendation does not necessarily mean that a tree should be removed immediately. At a December 13, 2010 meeting, which included representatives from the City's Public Works, Planning, and Parks and Recreation Departments, and Miami-Dade County's Public Works Department, it was agreed that the removal and "dissection" of five or six high-hazard Australian pines is the logical next step. The dissections would provide more detailed information about the extent of decay in the trunks and roots of selected trees, than could be obtained by Mr. Lippi's non-destructive testing. Combining Mr. Lippi's findings with direct observation of existing internal decay will allow a more accurate assessment of the true risk presented by trees with observed decay, so will allow better-informed management decisions. Without this additional testing, Mr. Lippi believes we must err on the side of caution and remove all trees that have a hazard number of 11 or 12. Tree evaluations can identify risk factors that predispose trees to fail, but cannot predict when or if a failure will actually occur, unless the tree has obvious signs of impending failure, such as a suddenly increased lean or roots pulling out of the ground. Often trees with basal or root decay will appear healthy and green because there are sufficient feeder roots to provide nutrients and water, but the tree's base and structural roots, which are essential for stability, will be weakened by decay.

As required, an application was submitted to the Historic Preservation Board requesting the removal of five or six Australian pines along Pinetree Drive for more detailed examination and analysis of decay. The application was approved at the January 11, 2011 meeting of the Historic Preservation Board, and the application has been noticed for and is included in the January 19, 2011 City Commission meeting agenda.

As you may know, Australian pine is prohibited by the State, County, and City, and no decision has yet been made concerning the species of trees which will replace Australian pines removed from Pinetree Drive. Please also know that unless there is an immediate and imminent danger, no other tree(s) will be removed without the Commission's knowledge and approval.

While the removal of any tree in the City is a concern, especially with our desire to maintain our tree canopy and more so because of the significance of the trees in this particular roadway, the potential safety issues, and the need to determine the condition of these trees, makes it prudent for us to take this present course.

Copies of the report, *Australian Pine Assessment for the Pinetree Drive Roadway Improvement Project*, the associated data set -- Australian Pine Assessment Data Only -- and a location table are available at: M:\$CMB\Parks & Rec\Greenspace Management-DO NOT DELETE\Urban Forestry Issues\Australian Pine Evaluation.

Should you have additional questions please advise.

JMG/HMF/KS/JO/CL